



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2011-1230; Directorate Identifier 2011-NM-141-AD]

RIN 2120-AA64

Airworthiness Directives; Bombardier, Inc. Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: We propose to adopt a new airworthiness directive (AD) for Model DHC-8-102, -103, and -106 airplanes and Model DHC-8-200, -300, and -400 series airplanes. This proposed AD results from mandatory continuing airworthiness information (MCAI) originated by an aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as:

Several reports have been received regarding cracking of the DHC-8 Series 100 rudder actuator mounting bracket. An investigation revealed that the mounting bracket has been under-designed based on the static and endurance loading conditions. The failure of the mounting brackets that attach the power control unit (PCU) to the airframe could result in a loss of the rudder actuating system. The loss of both rudder PCU actuators could result in free play of the rudder control surface and potentially induce a flutter condition.

* * * * *

The unsafe condition is loss of controllability of the airplane. The proposed AD would

require actions that are intended to address the unsafe condition described in the MCAI.

DATES: We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Bombardier, Inc., Q-Series Technical Help Desk, 123 Garratt Boulevard, Toronto, Ontario M3K 1Y5, Canada; telephone 416-375-4000; fax 416-375-4539; e-mail thd.qseries@aero.bombardier.com; Internet <http://www.bombardier.com>. You may review copies of the referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington. For information on the availability of this material at the FAA, call 425-227-1221.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Cesar Gomez, Aerospace Engineer, Airframe and Mechanical Systems Branch, ANE-171, FAA, New York Aircraft Certification Office (ACO), 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone (516) 228-7318; fax (516) 794-5531.

SUPPLEMENTARY INFORMATION:

Comments Invited

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2011-1230; Directorate Identifier 2011-NM-141-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will

also post a report summarizing each substantive verbal contact we receive about this proposed AD.

Discussion

Transport Canada Civil Aviation, which is the aviation authority for Canada, has issued Canadian Airworthiness Directive CF-2011-12, dated June 6, 2011 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

Several reports have been received regarding cracking of the DHC-8 Series 100 rudder actuator mounting bracket. An investigation revealed that the mounting bracket has been under-designed based on the static and endurance loading conditions. The failure of the mounting brackets that attach the power control unit (PCU) to the airframe could result in a loss of the rudder actuating system. The loss of both rudder PCU actuators could result in free play of the rudder control surface and potentially induce a flutter condition.

This [TCCA] directive mandates the installation of a new design of rudder actuator mounting bracket [adapter].

The unsafe condition is loss of controllability of the airplane. You may obtain further information by examining the MCAI in the AD docket.

Relevant Service Information

Bombardier has issued Service Bulletins 8-27-110, Revision C, dated May 13, 2011; and 84-27-53, dated November 26, 2010. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

FAA’s Determination and Requirements of This Proposed AD

This product has been approved by the aviation authority of another country, and

is approved for operation in the United States. Pursuant to our bilateral agreement with the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

Differences Between This AD and the MCAI or Service Information

We have reviewed the MCAI and related service information and, in general, agree with their substance. But we might have found it necessary to use different words from those in the MCAI to ensure the AD is clear for U.S. operators and is enforceable. In making these changes, we do not intend to differ substantively from the information provided in the MCAI and related service information.

We might also have proposed different actions in this AD from those in the MCAI in order to follow FAA policies. Any such differences are highlighted in a NOTE within the proposed AD.

Costs of Compliance

Based on the service information, we estimate that this proposed AD would affect about 171 products of U.S. registry. We also estimate that it would take up to 10 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost up to \$2856 per product. Based on these figures, we estimate the cost of the proposed AD on U.S. operators to be up to \$633,726, or \$3,706 per product.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA’s authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. “Subtitle VII: Aviation Programs,” describes in more detail the scope of the Agency’s authority.

We are issuing this rulemaking under the authority described in “Subtitle VII, Part A, Subpart III, Section 44701: General requirements.” Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and

(3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

We prepared a regulatory evaluation of the estimated costs to comply with this proposed AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new AD:

Bombardier, Inc.: Docket No. FAA-2011-1230; Directorate Identifier 2011-NM-141-AD.

Comments Due Date

(a) We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

Affected ADs

(b) None.

Applicability

(c) This AD applies to Bombardier, Inc. airplanes identified in paragraphs (c)(1) and (c)(2) of this AD, certificated in any category.

(1) Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes, serial numbers 003 through 672 inclusive.

(2) Model DHC-8-400, -401, and -402 airplanes, serial numbers 4001 through 4343 inclusive.

Subject

(d) Air Transport Association (ATA) of America Code 27: Flight controls.

Reason

(e) The mandatory continuing airworthiness information (MCAI) states:

Several reports have been received regarding cracking of the DHC-8 Series 100 rudder actuator mounting bracket. An investigation revealed that the mounting bracket has been under-designed based on the static and endurance loading conditions. The failure of the mounting brackets that attach the power control unit (PCU) to the airframe could result in a loss of the rudder actuating system. The loss of both rudder PCU actuators could result in free play of the rudder control surface and potentially induce a flutter condition.

* * * * *

The unsafe condition is loss of controllability of the airplane.

Compliance

(f) You are responsible for having the actions required by this AD performed within the compliance times specified, unless the actions have already been done.

Free-Play Check and Corrective Actions

(g) Within 6,000 flight hours or 3 years after the effective date of this AD, whichever occurs first, do the actions required by paragraph (g)(1) or (g)(2) of this AD, as applicable.

(1) For Model DHC-8-102, -103, -106, -201, -202, -301, -311, and -315 airplanes: Install a new CRES mounting adapter with new bolts by incorporating MODSUM 8Q101890, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 8-27-110, Revision C, dated May 13, 2011.

(2) For DHC-8-400, -401, and -402 airplanes: Replace the existing upper and lower mounting adapters of the PCU with redesigned adapters by incorporating MODSUM 4-113655, in accordance with the Accomplishment Instructions of Bombardier Service Bulletin 84-27-53, dated November 26, 2010.

Credit for Actions Accomplished in Accordance with Previous Service Information

(h) Actions accomplished before the effective date of this AD in accordance with Bombardier Service Bulletins 8-27-110, Revision A, dated December 3, 2010, and Revision B, dated January 31, 2011, are considered acceptable for compliance with the corresponding actions specified in paragraph (g)(1) of this AD.

FAA AD Differences

Note 1: This AD differs from the MCAI and/or service information as follows:
No differences.

Other FAA AD Provisions

(i) The following provisions also apply to this AD:

(1) Alternative Methods of Compliance (AMOCs): The Manager, New York ACO, ANE-170, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. Send information to ATTN: Program Manager, Continuing Operational Safety, FAA, New York ACO, 1600 Stewart Avenue, Suite 410, Westbury, New York 11590; telephone 516-228-7300; fax 516-794-5531. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

(2) Airworthy Product: For any requirement in this AD to obtain corrective actions from a manufacturer or other source, use these actions if they are FAA-approved. Corrective actions are considered FAA-approved if they are approved by the State of Design Authority (or their delegated agent). You are required to assure the product is airworthy before it is returned to service.

Related Information

(j) Refer to MCAI Canadian Airworthiness Directive CF-2011-12, dated June 6, 2011; Bombardier Service Bulletin 8-27-110, Revision C, dated May 13, 2011; and Bombardier Service Bulletin 84-27-53, dated November 26, 2010; for related information.

Issued in Renton, Washington, on November 7, 2011.

Kalene C. Yanamura,
Acting Manager,
Transport Airplane Directorate
Aircraft Certification Service.

[FR Doc. 2011-29798 Filed 11/17/2011 at 8:45 am; Publication Date: 11/18/2011]